Attorney Docket No.: AVSI-0034 (108328.00172)

In the Claims:

- 1. (Withdrawn) An isolated nucleic acid expression construct comprising:
 - a myogenic promoter;
 - a nucleic acid sequence encoding an insulin-like growth factor I ("IGF-I") or functional biological equivalent thereof; and
 - a 3' untranslated region (3'UTR);
 - wherein the isolated nucleic acid expression construct is substantially free from a viral backbone; the myogenic promoter, the nucleic acid sequence encoding IGF-I, and the 3'UTR are operably linked; and the isolated nucleic acid expression construct has an *in vivo* expression activity for the encoded IGF-I or functional biological equivalent thereof in a tissue of a subject.
- 2. (Withdrawn) The isolated nucleic acid expression construct of claim 1, wherein the myogenic promoter comprises transcriptional loci from a family of MEF-1, MEF-2, TEF-1, SRE or SP.
- 3. (Withdrawn) The isolated nucleic acid expression construct of claim 1, wherein the myogenic promoter comprises a nucleic acid sequence that is at least 85% identical to SEQID No.: 3.
- 4. (Withdrawn) The isolated nucleic acid expression construct of claim 1, wherein the encoded IGF-I or functional biological equivalent thereof has an amino acid sequence that is at least 85% identical to SEQID No: 4.
- 5. (Withdrawn) The isolated nucleic acid expression construct of claim 1, wherein the encoded IGF-I or functional biological equivalent thereof has an amino acid sequence of SEQID No: 4, or SEQID No.:4 with conservative amino acid substitutions.

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6. (Withdrawn) The isolated nucleic acid expression construct of claim 1, wherein the 3'UTR comprises a nucleic acid sequence that is at least 85% identical to SEQID No.: 5 from a

skeletal alpha actin gene, or at least 85% identical to SEQID No.: 6 from a human growth

hormone gene.

7. (Withdrawn) The isolated nucleic acid expression construct of claim 1, further comprising a transfection-facilitating vector system.

8. (Withdrawn) The isolated nucleic acid expression construct of claim 7, wherein the transfection-

facilitating vector system is a plasmid, a viral vector, a liposome, or a cationic lipid.

9. (Withdrawn) The isolated nucleic acid expression construct of claim 1, wherein a construct nucleic acid sequence is at least 90% identical to SeqID#1, or a degenerate variant of SEQID#1.

10. (Withdrawn) The isolated nucleic acid expression construct of claim 1, wherein a construct nucleic acid sequence is at least 90% identical to SeqID#2, or a degenerate variant of SEQID#2.

11. (Withdrawn) The isolated nucleic acid expression construct of claim 1, wherein a construct nucleic acid sequence is Seq. ID No. 1 or Seq. ID No. 2.

- 12. (Withdrawn) The isolated nucleic acid expression construct of claim 1, further comprising a transfection-facilitating polypeptide.
- 13. (Withdrawn) The isolated nucleic acid expression construct of claim 12, wherein the transfection-facilitating polypeptide comprises a charged polypeptide.
- 14. (Withdrawn) The isolated nucleic acid expression construct of claim 11, wherein the transfection-facilitating polypeptide comprises poly-L-glutamate.

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- 15. (Withdrawn) An isolated nucleic acid comprising a sequence at least 95% identical to SeqID#1, or a degenerate variant of SEQID#1.
- 16. (Withdrawn) An isolated nucleic acid comprising a sequence at least 95% identical to SeqID#2, or a degenerate variant of SEQID#2.
- 17. (Currently Amended) A method for stimulating angiogenesis, or stimulating myogenesis, or elevating levels of an angiogenic factor, or stimulating endogenous production of an angiopoietin, or treating a museular or vascular complications of diabetes in a subject, comprising the steps of:

injecting into a <u>muscle</u> tissue of the subject an isolated nucleic acid expression construct; and

electroporating the muscle tissue;

wherein;

the muscle tissue comprises cells; and

the isolated nucleic acid expression construct comprises:

- a myogenic promoter;
- a nucleic acid sequence encoding an insulin-like growth factor I ("IGF-I") or functional biological equivalent thereof; wherein the functional biological equivalent is stimulating angiogenesis; and
- a 3' untranslated region (3'UTR);

wherein the isolated nucleic acid expression construct is substantially free from a viral backbone; <u>and</u> the myogenic promoter, the nucleic acid sequence encoding IGF-I, and the 3'UTR are operably linked.; and the isolated nucleic acid expression construct has an in vivo expression activity for the encoded IGF-I or functional biological equivalent thereof in the tissue of the subject.

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- 18. (Currently Amended) The method of claim 17, wherein the myogenic promoter comprises a nucleic acid sequence that is at least 85% identical to SEQID No.: 3 and retains a myogenic promoter activity.
- 19. (Currently Amended) The method of claim 17, wherein the encoded IGF-I or functional biological equivalent thereof has an amino acid sequence that is at least 85% identical to SEQID No: 4 and retains the function of stimulating angiogenesis in the muscle tissue of the subject.
- 20. (Currently Amended) The method of claim 17, wherein the encoded IGF-I or functional biological equivalent thereof has an amino acid sequence of SEQID No: 4, or SEQID No.:4 with conservative amino acid substitutions and retains the function of stimulating angiogenesis in the muscle tissue of the subject.
- 21. (Previously Presented) The method of claim 17, wherein the 3'UTR comprises a nucleic acid sequence that is at least 85% identical to SEQID No.: 5 from a skeletal alpha actin gene, or at least 85% identical to SEQID No.: 6 from a human growth hormone gene.
- 22. (Previously Presented) The method of claim 17, further comprising: mixing the isolated nucleic acid expression construct with a transfection-facilitating system before delivering the isolated nucleic acid expression construct into the tissue of the subject.
- 23. (Previously Presented) The method of claim 22, wherein the transfection-facilitating system is a liposome, or a cationic lipid.
- 24. (Currently Amended) The method of claim 17, wherein a the isolated nucleic acid expression construct nucleic acid sequence is at least 90% identical to SeqID#1 SEQID NO.:1, or a degenerate variant of SEQID#1.

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- 25. (Withdrawn) The method of claim 17, wherein a construct nucleic acid sequence is at least 90% identical to SeqID#2, or a degenerate variant of SEQID#2.
- 26. Cancelled.
- 27. (Original) The method of claim 17, further comprising mixing the isolated nucleic acid expression construct with an effective concentration of a transfection-facilitating polypeptide before delivering the isolated nucleic acid expression construct into the tissue of the subject.
- 28. (Original) The method of claim 27, wherein the transfection-facilitating polypeptide comprises a charged polypeptide.
- 29. (Original) The method of claim 27, wherein the transfection-facilitating polypeptide comprises poly-L-glutamate.
- 30. Cancelled.
- 31. (Original) The method of claim 17, wherein the nucleic acid expression construct is delivered into the tissue of the subject via a single administration.
- 32. Cancelled.
- 33. (Original) The method of claim 17, wherein the cells of the tissue are diploid cells.
- 34. Cancelled.
- 35. Cancelled.
- 36. Cancelled.

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- 37. (Currently Amended) The method of claim 3417, wherein the encoded IGF-I is a biologically active polypeptide; and the encoded functional biological equivalent of IGF-I is a polypeptide that has been engineered to contain a distinct amino acid sequence while simultaneously having similar or improved biological activity when compared to the IGF-I polypeptide; wherein the biological activity is stimulating angiogenesis.
- 38. (Original) The method of claim 17, wherein the subject is a human, a pet animal, a farm animal, a food animal, or a work animal.
- 39. (Withdrawn) The method of claim 17, wherein the angiogenic factor comprises a vascular endothelial growth factor ("VEGF") having an amino acid sequence that is at least 85% identical to SEQID No: 7.
- 40. (Withdrawn) The method of claim 17, wherein the angiogenic factor comprises a vascular endothelial growth receptor ("VEGF receptor").

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